CLAIMS:

1. A method for treating a disease, disorder or injury in an organ which is susceptible to a T-cell-mediated specific autoimmune disease, wherein said organ disease, disorder or injury is other than an autoimmune disease, the method comprising immunizing an individual having such a disease, disorder or injury with an agent selected from the group consisting of:

(a) a pathogenic self-antigen associated with a T-cell-mediated specific autoimmune disease of said organ;

(b) a peptide which sequence is comprised within the sequence of said pathogenic self-antigen of (a);

(c) a peptide obtained by modification of the peptide of (b), which modification consists in the replacement of one or more amino acid residues of the peptide by different amino acid residues, said modified peptide still being capable of recognizing the T-cell receptor recognized by the parent peptide but with less affinity (hereinafter "modified peptide");

(d) a nucleotide sequence encoding a pathogenic self-antigen of (a), a peptide of (b), or a modified peptide of (c) ; and

(e) T cells activated by a pathogenic self-antigen of (a), a peptide of (b), or a modified peptide of (c).

2. The method of claim 1 wherein said pathogenic self-antigen is associated with a T-cell-mediated eye-specific autoimmune disease.

3. The method of claim 2 wherein said pathogenic self-antigen is an uveitogenic antigen associated with autoimmune uveitis.

4. The method of claim 3 wherein said pathogenic uveitogenic antigen is selected from the group consisting of interphotoreceptor retinoid-binding protein (IRBP), S-antigen (S-Ag) and rhodopsin.

5. The method of claim 4 wherein said pathogenic uveitogenic antigen is IRBP and said agent is selected from the group consisting of:

(a) interphotoreceptor retinoid-binding protein (IRBP);

(b) a peptide which sequence is comprised within the sequence of IRBP;

(c) a peptide obtained by modification of the peptide of (b), which modification consists in the replacement of one or more amino acid residues of the peptide by different amino acid residues, said modified peptide still being capable of recognizing the T-cell receptor recognized by the parent peptide but with less affinity (hereinafter "modified peptide");

(d) a nucleotide sequence encoding IRPB, a peptide of (b), or a modified peptide of (c) ; and

(e) T cells activated by an agent selected from the group consisting of IRPB , a peptide of (b), and a modified peptide of (c).

6. The method of claim 5 wherein said peptide (b) which sequence is comprised within the sequence of IRBP is selected from the group consisting of the peptides:

ADGSSWEGVGVVPDV (SEQ ID NO:1);

PTARSVGAADGSSWEGVGVVPDV (SEQ ID NO:2); and

HVDDTDLYLTIPTARSVGAADGS (SEQ ID NO:3).

7. The method of claim 4 wherein said pathogenic uveitogenic antigen is S-Antigen and said agent is selected from the group consisting of:

(a) S-antigen (S-Ag);

(b) a peptide which sequence is comprised within the sequence of S-Ag;

(c) a peptide obtained by modification of the peptide of (b), which modification consists in the replacement of one or more amino acid residues of the peptide by different amino acid residues, said modified peptide still being capable of recognizing the T-cell receptor recognized by the parent peptide but with less affinity (hereinafter "modified peptide");

(d) a nucleotide sequence encoding S-Ag, a peptide of (b), or a modified peptide of (c) ; and

(e) T cells activated by an agent selected from the group consisting of S-Ag, a peptide of (b), and a modified peptide of (c).

8. The method of claim 7 wherein said peptide (b) which sequence is comprised within the sequence of S-Ag is selected from the group consisting of the peptides:

TSSEVATE (SEQ ID NO:4);
DTNLASST (SEQ ID NO:6);
DTNLASSTIIKEGIDKTV (SEQ ID NO:8);
VPLLANNRERRGIALDGKIKHE (SEQ ID NO:9);
TSSEVATEVPFRLMHPQPED (SEQ ID NO:10);
SLTKTLTLVPLLANNRERRG (SEQ ID NO:11);
SLTRTLTLLPLLANNRERAG (SEQ ID NO:12);
KEGIDKTVMGILVSYQIKVKL (SEQ ID NO:13); and
KEGIDRTVLGILVSYQIKVKL (SEQ ID NO:14).

9. The method of claim 7 wherein said modified peptide (c) is selected from the group consisting of the peptides:

TSSEAATE (SEQ ID NO:5); and
DTALASST (SEQ ID NO:7).

10. The method of claim 2 for treating a disease, disorder or injury in the eye, wherein said eye disease, disorder or injury is other than an autoimmune disease.

11. The method of claim 10 wherein said non-autoimmune eye injury is blunt trauma caused by an agent selected from the group consisting of foreign bodies, contusion, laceration, burns or laser surgery.

12. The method of claim 10 wherein said non-autoimmune eye disorder is selected from the group consisting of a conjunctival, a corneal, a retinal, and an optic nerve or optic pathway disorder.

13. The method of claim 10 wherein said non-autoimmune disorder is glaucoma.

14. Use of an agent selected from the group consisting of:

(a) a pathogenic self-antigen associated with a T-cell-mediated specific autoimmune disease of an organ;

(b) a peptide which sequence is comprised within the sequence of said pathogenic self-antigen of (a);

(c) a peptide obtained by modification of the peptide of (b), which modification consists in the replacement of one or more amino acid residues of the peptide by different amino acid residues, said modified peptide still being capable of recognizing the T-cell receptor recognized by the parent peptide but with less affinity (hereinafter "modified peptide");

(d) a nucleotide sequence encoding a pathogenic self-antigen of (a), a peptide of (b), or a modified peptide of (c) ; and

(e) T cells activated by a pathogenic self-antigen of (a), a peptide of (b), or a modified peptide of (c),

for the preparation of a pharmaceutical composition for treatment of a disease, disorder or injury in said organ which is susceptible to a T-cell-mediated specific autoimmune disease, wherein said organ disease, disorder or injury is other than an autoimmune disease.

15. The use of claim 14 wherein said pathogenic self-antigen is associated with a T-cell-mediated eye-specific autoimmune disease.

16. The use of claim 15 wherein said pathogenic self-antigen is an uveitogenic antigen associated with autoimmune uveitis.

17. The use of claim 16 wherein said pathogenic uveitogenic antigen is selected from the group consisting of interphotoreceptor retinoid-binding protein (IRBP), S-antigen (S-Ag) and rhodopsin.

18. The use of claim 17 wherein said pathogenic uveitogenic antigen is IRBP and said agent is selected from the group consisting of:

(a) interphotoreceptor retinoid-binding protein (IRBP);

(b) a peptide which sequence is comprised within the sequence of IRBP;

(c) a peptide obtained by modification of the peptide of (b), which modification consists in the replacement of one or more amino acid residues of the peptide by different amino acid residues, said modified peptide still being capable of recognizing the T-cell receptor recognized by the parent peptide but with less affinity (hereinafter "modified peptide");

(d) a nucleotide sequence encoding IRPB, a peptide of (b), or a modified peptide of (c) ; and

(e) T cells activated by an agent selected from the group consisting of IRPB , a peptide of (b), and a modified peptide of (c).

19. The use of claim 18 wherein said peptide (b) which sequence is comprised within the sequence of IRBP is selected from the group consisting of the peptides:

ADGSSWEGVGVVPDV (SEQ ID NO:1);

PTARSVGAADGSSWEGVGVVPDV (SEQ ID NO:2); and

HVDDTDLYLTIPTARSVGAADGS (SEQ ID NO:3).

20. The use of claim 17 wherein said pathogenic uveitogenic antigen is S-Antigen and said agent is selected from the group consisting of:

(a) S-antigen (S-Ag);

(b) a peptide which sequence is comprised within the sequence of S-Ag;

(c) a peptide obtained by modification of the peptide of (b), which modification consists in the replacement of one or more amino acid residues of the

peptide by different amino acid residues, said modified peptide still being capable of recognizing the T-cell receptor recognized by the parent peptide but with less affinity (hereinafter "modified peptide");

(d) a nucleotide sequence encoding S-Ag, a peptide of (b), or a modified peptide of (c) ; and

(e) T cells activated by an agent selected from the group consisting of S-Ag, a peptide of (b), and a modified peptide of (c).

21. The use of claim 20 wherein said peptide (b) which sequence is comprised within the sequence of S-Ag is selected from the group consisting of the peptides:

TSSEVATE (SEQ ID NO:4);
DTNLASST (SEQ ID NO:6);
DTNLASSTIIKEGIDKTV (SEQ ID NO:8);
VPLLANNRERRGIALDGKIKHE (SEQ ID NO:9);
TSSEVATEVPFRLMHPQPED (SEQ ID NO:10);
SLTKTLTLVPLLANNRERRG (SEQ ID NO:11);
SLTRTLTLLPLLANNRERAG (SEQ ID NO:12);
KEGIDKTVMGILVSYQIKVKL (SEQ ID NO:13); and
KEGIDRTVLGILVSYQIKVKL (SEQ ID NO:14).

22. The use of claim 20 wherein said modified peptide (c) is selected from the group consisting of the peptides:

TSSEAATE (SEQ ID NO:5); and
DTALASST (SEQ ID NO:7).

23. The use according to any one of claims 14 to 22 for treating a disease, disorder or injury in the eye, wherein said eye disease, disorder or injury is other than an autoimmune disease.

24. The use of claim 23 wherein said non-autoimmune eye injury is blunt trauma caused by an agent selected from the group consisting of foreign bodies, contusion, laceration, burns or laser surgery.

25. The use of claim 23 wherein said non-autoimmune eye disorder is selected from the group consisting of a conjunctival, a corneal, a retinal, and an optic nerve or optic pathway disorder.

26. The use of claim 23 wherein said non-autoimmune disorder is glaucoma.

27. A pharmaceutical composition for treating a disease, disorder or injury in an organ which is susceptible to a T-cell-mediated specific autoimmune disease, wherein said organ disease, disorder or injury is other than an autoimmune disease, the composition comprising a pharmaceutically acceptable carrier and an agent selected from the group consisting of:

(a) a pathogenic self-antigen associated with a T-cell-mediated specific autoimmune disease of said organ;

(b) a peptide which sequence is comprised within the sequence of said pathogenic self-antigen of (a);

(c) a peptide obtained by modification of the peptide of (b), which modification consists in the replacement of one or more amino acid residues of the peptide by different amino acid residues, said modified peptide still being capable of recognizing the T-cell receptor recognized by the parent peptide but with less affinity (hereinafter "modified peptide");

(d) a nucleotide sequence encoding a pathogenic self-antigen of (a), a peptide of (b) or a modified peptide of (c) ; and

(e) T cells activated by a pathogenic self-antigen of (a), a peptide of (b) or a modified peptide of (c).

28. The pharmaceutical composition according to claim 27 wherein said pathogenic self-antigen is associated with a T-cell-mediated eye-specific autoimmune disease.

29. The pharmaceutical composition of claim 28 wherein said pathogenic self-antigen is an uveitogenic antigen associated with autoimmune uveitis, said uveitogenic antigen being selected from the group consisting of interphotoreceptor retinoid-binding protein (IRBP), S-antigen (S-Ag) and rhodopsin.